eTable A: Definitions of Sepsis and the three Comparison Cohorts

Sepsis	Patients whose first hospitalization after HRS survey was for sepsis, defined as a hospitalization with an ICD-9-CM code for infection and an ICD-9-CM code for acute organ dysfunction (785.5 "shock without trauma"; 458 "hypotension"; procedural code 96.7 "mechanical ventilation"; 348.3 "encephalopathy"; 293 "transient organic psychosis"; 348.1 "anoxic brain injury": 287.4 "secondary thrombocytopenia"; 287.5 "thrombocytopenia, unspecified"; 286.9 "other/unspecified coagulation defect"; 286.6 "defibrination syndrome"; 570 "acute and subacute necrosis of liver"; 573.4 "hepatic infarction"; 584 "acute renal failure") or an explicit ICD-9-CM code for severe sepsis (995.92) or septic shock (785.52).
Not Currently Hospitalized Adult	All patients were considered in this category for each consecutive day that they were alive and not hospitalized following HRS survey.
Non-sepsis infection	Patients whose first hospitalization after HRS survey was for a non-sepsis infection, defined as a hospitalization with an ICD-9-CM code for infection included in the definition of sepsis, but without an ICD-9-CM code for acute organ dysfunction.
Sterile Inflammatory Condition	Patients whose first hospitalization after HRS survey was for a sterile inflammatory condition, defined as a Healthcare Cost and Utilization Project clinical classification software single-level diagnosis categories 144, 202, 210, 225-236, 239, 240, 244, 249: "regional enteritis and ulcerative colitis", "rheumatoid arthritis and related disease", "systemic lupus erythematous and other connective tissue disorders", "joint disorders and dislocations; trauma-related", "fracture of the neck of the femur", "spinal cord injury", "skull and face fractures", "fracture of the upper limb", "fracture of the lower limb", "other fractures", "strains and sprains", "intracranial injury", "crushing injury or internal injury", open wounds of the head, neck, and trunk", "open wounds of the extremities", "superficial injury; contusion", "burns", "other injuries due to external causes", or "shock" with no secondary ICD-9-CM codes for either infection or sepsis; or principal ICD-9-CM code 577.0 "acute pancreatitis", 958.x (various specified traumatic injuries), 959.x "other and unspecified injuries", 995.94 "systemic inflammatory response due to noninfectious process without acute organ dysfunction", 995.94 "systemic inflammatory response due to noninfectious process with acute organ dysfunction" and no secondary ICD-9-CM codes for either infection or sepsis.

eTable B: Covariate Balance Between Matched Sepsis and Non-Hospitalized Cohorts

	Sepsis (N=777)	Not Currently Hospitalized (N=777)	*p*
Demographics			
Age, years, mean (SD)	78.7 (8.2)	78.2 (8.1)	0.99
Male, N (%)	358 (46.1%)	358 (46.1%)	1.00
Race, N (%)			0.89
White/Caucasian	629 (81.0%)	623 (80.2%)	
Black/African American	133 (17.1%)	140 (18.0%)	
Other	15 (1.9%)	14 (1.8%)	
Hispanic, N (%)	61 (7.9%)	55 (7.1%)	0.56
Married or partnered, N (%)	345 (45.0%)	350 (45.0%)	0.80
Economic Status			
Total Wealth			0.99
Quintile 5 positive assets	102 (13.1%)	101 (13.0%)	
Quintile 4 positive assets	112 (14.4%)	111 (14.3%)	
Quintile 3 positive assets	126 (16.2%)	124 (16.0%)	
Quintile 2 positive assets	159 (20.5%)	151 (19.4%)	
Quintile 1 positive assets	196 (25.2%)	205 (26.4%)	
Net negative or zero assets	82 (10.6%)	85 (10.9%)	
Government Assistance	65 (8.4%)	63 (8.1%)	0.55
Health Status			
Charlson co-morbidity Index, median (IQR)	2 (0-4)	2 (0-4)	0.84
Congestive Heart Failure	165 (21.2%)	157 (20.2%)	0.62
Diabetes without Complications	194 (25.0%)	227 (29.2%)	0.06
Diabetes with Complications	75 (9.7%)	62 (8.0%)	0.25
Dementia	44 (5.7%)	34 (4.4%)	0.25
Moderate or severe liver disease	4 (0.5%)	3 (0.4%)	0.71
Cancer	84 (10.8%)	94 (12.1%)	0.43
Renal disease	77 (9.9%)	61 (7.9%)	0.15
Connective tissue disease	30 (3.9%)	25 (3.2%)	0.49
I/ADL limitations, median (IQR)	1 (0-4)	1 (0-3)	0.08
Self-Rating of Health, N (%)			0.68
Excellent	24 (3.1%)	20 (2.6%)	
Very Good	106 (13.6%)	113 (14.5%)	
Good	216 (27.8%)	203 (26.1%)	
Fair	244 (31.4%)	264 (34.0%)	
Poor	187 (24.1%)	176 (22.7%)	
Body Mass Index, N (%)			0.24
Very Severely Obese	24 (3.1%)	21 (2.7%)	
Severely Obese	35 (4.5%)	37 (4.8%)	
Obese	94 (12.1%)	103 (13.3%)	
Overweight	273 (35.1%)	237 (30.5%)	
Normal	301 (38.7%)	306 (39.4%)	
Underweight	41 (5.3%)	63 (8.1%)	
Healthcare Use			
Hospitalizations in prior year, median (IQR)	0 (0-1)	0 (0-1)	0.11
Sepsis in prior year, N (%)	24 (3.1%)	24 (3.1%)	1.00
Residence in a nursing home, N (%)	85 (10.9%)	72 (9.3%)	0.27
Other			
Days from HRS survey to index hospitalization, median (IQR)	291 (127-486)	294 (133-490)	0.70
Risk of developing sepsis (Propensity Score), median (IQR)	5.3%(2.9%-10.7%)	5.3% (3.0%-10.6%)	0.11

I/ADL, activities and instrumental activities of daily living.

eTable C: Covariate Balance Between Matched Sepsis and Non-sepsis infection Cohorts

	Sepsis (N=788)	Non-sepsis infection (N=788)	p
Demographics			
Age, years, mean (SD)	80.1 (8.1)	80.1 (8.1)	0.89
Male, N (%)	363 (46.1%)	363 (46.1%)	1.00
Race, N (%)			0.19
White/Caucasian	631 (80.1%)	654 (83.0%)	
Black/African American	146 (18.5%)	126 (15.2%)	
Other	11 (1.4%)	14 (1.8%)	
Hispanic, N (%)	56 (7.1%)	65 (8.3%)	0.39
Married or partnered, N (%)	358 (45.4%)	338 (42.9 %)	0.31
Economic Status			
Total Wealth			0.37
Quintile 5 positive assets	107 (13.6%)	92 (11.7%)	
Quintile 4 positive assets	111 (14.1%)	103 (13.1%)	
Quintile 3 positive assets	124 (15.7%)	142 (18.0%)	
Quintile 2 positive assets	158 (20.1%)	149 (18.9%)	
Quintile 1 positive assets	204 (25.9%)	197 (25.0%)	
Net negative or zero assets	84 (10.7%)	105 (13.3%)	
Government Assistance	69 (8.8%)	70 (8.9%)	0.48
Health Status			
Charlson co-morbidity Index, median (IQR)	2 (0-4)	2 (0-4)	0.47
Congestive Heart Failure	169 (21.5%)	163 (20.7%)	0.71
Diabetes without Complications	200 (25.4%)	226 (28.7%)	0.14
Diabetes with Complications	69 (8.8%)	59 (7.5%)	0.36
Dementia	49 (6.2%)	49 (6.2%)	1.00
Moderate or severe liver disease	4 (0.5%)	1 (0.1%)	0.18
Cancer	94 (11.9%)	101 (12.8%)	0.59
Renal disease	67 (8.5%)	67 (8.5%)	1.00
Connective tissue disease	28 (3.6%)	32 (4.1%)	0.60
I/ADL limitations, median (IQR)	1 (0-4)	1 (0-5)	0.28
Self-Rating of Health, N (%)			0.85
Excellent	24 (3.0%)	30 (3.8%)	
Very Good	99 (12.6%)	100 (12.7%)	
Good	206 (26.1%)	212 (26.9%)	
Fair	259 (32.9%)	242 (30.7%)	
Poor	200 (25.4%)	204 (25.9%)	
Body Mass Index, N (%)			0.76
Very Severely Obese	23 (2.9%)	25 (3.2%)	
Severely Obese	38 (4.8%)	36 (4.6%)	
Obese	107 (13.6%)	100 (12.7%)	
Overweight	229 (29.1%)	247 (31.4%)	
Normal	314 (39.9%)	320 (40.6%)	
Underweight	65 (8.3%)	49 (6.2%)	
Healthcare Use			
Hospitalizations in prior year, median (IQR)	0 (0-1)	0 (0-1)	0.17
Sepsis in prior year, N (%)	35 (4.4%)	31 (3.9%)	0.62
Residence in a nursing home, N (%)	92 (11.7%)	109 (13.8%)	0.20
Other			
Days from HRS survey to index hospitalization, median (IQR)	295 (127-482)	224 (117-453)	0.03
Risk of developing sepsis (Propensity Score), median (IQR)	5.6% (3.1%-11.4%)	5.7% (3.1%-11.1%)	0.86

I/ADL, activities and instrumental activities of daily living.

eTable D: Covariate Balance Between Matched Sepsis and Sterile Inflammation Cohorts

	Sepsis (N=504)	Sterile Inflammation (N=504)	p
Demographics			
Age, years, mean ± SD	81.0 (8.0)	81.1 (8.1)	0.83
Male, N (%)	194 (38.5%)	194 (38.5%)	1.00
Race, N (%)			0.21
White/Caucasian	464 (92.1%)	464 (92.1%)	
Black/African American	38 (7.5%)	33 (6.6%)	
Other	2 (0.4%)	7 (1.4%)	
Hispanic, N (%)	35 (6.9%)	46 (9.1%)	0.20
Married or partnered, N (%)	224 (44.2%)	228 (45.2%)	0.80
Economic Status			
Total Wealth			0.62
Quintile 5 positive assets	74 (14.7%)	76 (15.1%)	
Quintile 4 positive assets	91 (18.1%)	72 (14.3%)	
Quintile 3 positive assets	90 (17.9%)	102 (20.2%)	
Quintile 2 positive assets	92 (18.3%)	95 (18.9%)	
Quintile 1 positive assets	112 (22.2%)	119 (23.6%)	
Net negative or zero assets	45 (8.9%)	40 (7.9%)	
Government Assistance	34 (6.8%)	29 (5.8%)	0.62
Health Status			
Charlson co-morbidity Index, median (IQR)	2 (0-3)	2 (0-3)	0.12
I/ADL limitations, median (IQR)	1 (0-3)	1 (0-4)	0.87
Congestive Heart Failure	86 (17.1%)	79 (15.7%)	0.55
Diabetes without Complications	116 (23.0%)	108 (21.4%)	0.54
Diabetes with Complications	37 (7.3%)	31 (6.2%)	0.45
Dementia	26 (5.2%)	28 (5.6%)	0.78
Moderate or severe liver disease	2 (0.4%)	1 (0.4%)	0.56
Cancer	57 (11.3%)	46 (9.1%)	0.25
Renal disease	38 (7.5%)	31 (6.2%)	0.38
Connective tissue disease	30 (6.0%)	17 (4.5%)	0.05
Self-Rating of Health, N (%)			0.71
Excellent	19 (3.8%)	13 (2.6%)	
Very Good	74 (14.7 %)	85 (16.9%)	
Good	150 (29.8%)	149 (29.6%)	
Fair	160 (31.8%)	155 (30.8%)	
Poor	101 (20.9%)	101 (20.4%)	
Body Mass Index, N (%)			0.13
Very Severely Obese	3 (0.6%)	5 (1.0%)	
Severely Obese	7 (1.4%)	5 (1.0%)	
Obese	45 (8.9%)	76 (15.5%)	
Overweight	164 (32.5%)	154 (30.6%)	
Normal	244 (48.4%)	226 (44.8%)	
Underweight	40 (7.9%)	37 (7.3%)	
Healthcare Use			
Hospitalizations in prior year, median (IQR)	0 (0-1)	0 (0-1)	0.55
Sepsis in prior year, N (%)	13 (2.6%)	10 (2.0%)	0.53
Residence in a nursing home, N (%)	60 (10.5%)	50 (8.7%)	0.32
Other			
Days from HRS survey to index hospitalization, median (IQR)	302.5 (130-448.5)	270.5 (103.5-454)	0.04
Risk of developing sepsis (Propensity Score), median (IQR)	4.7% (2.7%-8.2%)	5.0% (2.8%-8.3%)	0.50

I/ADL, activities and instrumental activities of daily living.

eTable E: Adjusted rates of mortality versus comparisons by time period

Time Period	Sepsis versus Not Currently Hospitalized (Adjusted Percentages[a]) (Sepsis 95% CI) (Non-Hosp. 95% CI)	Sepsis versus Non-sepsis infection (Adjusted Percentages[a]) (Sepsis 95% CI) (Infection 95% CI)	Sepsis versus Sterile Inflammation (Adjusted Percentages[a]) (Sepsis 95% CI) (Sterile Inflam. 95% CI)
0 - 30 day	**26.2% versus 0.8%** (23.2%-29.3%) (0.2%-1.3%)	**26.0% versus 7.1%** (22.9%-29.0%) (5.4%-8.9%)	**24.4% versus 4.8%** (20.5%-27.9%) (2.9%-6.6%)
31 - 90 day	**12.1% versus 1.4%** (9.4%-14.7%) (0.6%-2.3%)	**14.3% versus 6.4%** (11.6%-17.2%) (4.6%-8.1%)	**15.1% versus 4.8%** (11.5%-18.6%) (2.9%-6.6%)
91-180 day	**9.6% versus 2.6%** (7.0%-12.1%) (1.5%-3.7%)	**9.8% versus 5.8%** (7.2%-12.4%) (4.0%-7.5%)	**9.5% versus 5.3%** (6.3%-12.8%) (3.4%-7.3%)
181 day – 1 year	**11.6% versus 4.2%** (8.7%-14.5%) (2.8%-5.6%)	**12.8% versus 9.0%** (9.7%-15.8 %) (6.4%-10.5%)	11.4% versus 7.3% (7.8%-15.0%) (4.9%-9.7%)
>1 year – 2 year	**16.0% versus 10.7%** (12.5%-19.5%) (8.6%-12.9%)	15.7% versus 16.1% (12.1%-19.0%) (13.2%-19.2%)	17.0% versus 13.1% (10.9%-16.3%) (12.5%-21.5%)
31 day – 2 year	**40.4% versus 18.3%** (36.5%-44.2%) (15.7%-20.8%)	**42.8% versus 32.4%** (39.0%-46.7%) (29.2%-46.7%)	**43.5% versus 27.3%** (38.8%-48.2%) (23.7%-30.9%)

[a]Adjusted for age, gender, and propensity for sepsis, which includes age, race, ethnicity, gender, partnership, wealth, food stamp use, Charlson co-morbidity index, I/ADL limitations, self rating of health, body mass index, hospitalizations in the prior year, sepsis in the prior year, and residence in a nursing home.
Statistically significant results are presented in bold. Conceptually, this table reports the overall matched cohort's mortality if everyone had a sepsis hospitalization versus if everyone had the comparison condition.

eTable F: Rates of readmission among those who survived to discharge, by matched cohort

	Sepsis	Not currently hospitalized*	p
30-day readmission	**25.7%** (22.4%-29.3%)	**4.2%** (3.0%-5.9%)	<0.001
90-day readmission	**38.0%** (34.3%-41.9%)	**10.6%** (8.6%-12.9%)	<0.001
1-year readmission	**58.1%** (54.2%-62.0%)	**29.3%** (26.2%-32.7%)	<0.001

	Sepsis	Infection	p
30-day readmission	**24.6%** (21.4%-28.2%)	**16.7%** (14.1%-19.5%)	<0.001
90-day readmission	**35.8%** (32.2%-39.6%)	**27.2%** (24.2%-30.5%)	<0.001
1-year readmission	**55.9%** (52.0%-59.7%)	**52.2%** (48.7%-55.7%)	0.16

	Sepsis	Sterile Inflammation	p
30-day readmission	**24.3%** (20.4%-28.7%)	**24.3%** (20.7%-28.3%)	0.96
90-day readmission	**35.1%** (30.6%-39.8%)	**30.4%** (26.5%-34.6%)	0.12
1-year readmission	**54.1%** (49.3%-58.8%)	**47.2%** (42.8%-51.6%)	0.04

*For the not currently hospitalized cohort, there is no index hospitalization. Thus, we report 30-day, 90-day, and 1-year admissions (not readmissions) from the time of matching.

eTable G: Top 5 terminal hospitalization diagnoses* of patients with late mortality by matched cohorts

	Sepsis (N=191)		Not Currently Hospitalized (N=111)	
1	Sepsis	34 (17.8%)	Sepsis	15 (13.5%)
2	Pneumonia	16 (8.4%)	Acute Cerebrovascular Dz.	11 (9.5%)
3	Respiratory Failure	13 (6.8%)	Congestive Heart Failure	8 (7.2%)
4	Aspiration Pneumonitis	10 (5.2%)	Respiratory Failure	8 (7.2%)
5	Acute Cerebrovascular Dz.	8 (4.2%)	Pneumonia	5 (4.5%)
			Acute Renal Failure	5 (4.5%)

	Sepsis (N=198)		Non-Sepsis Infection (N=197)	
1	Sepsis	31 (15.7%)	Sepsis	27 (13.7%)
2	Pneumonia	15 (7.6%)	Pneumonia	19 (9.6%)
3	Respiratory Failure	14 (7.1%)	Respiratory Failure	14 (7.1%)
4	Congestive Heart Failure	10 (5.1%)	Congestive Heart Failure	13 (6.6%)
5	Aspiration Pneumonitis	9 (4.6%)	Aspiration Pneumonitis	11 (6.0%)

	Sepsis (N=129)		Sterile Inflammation (N=104)	
1	Sepsis	27 (20.9%)	Pneumonia	11 (10.6%)
2	Pneumonia	10 (7.8%)	Congestive Heart Failure	10 (9.6%)
3	Respiratory Failure	9 (7.0%)	Acute Cerebrovascular Dz.	7 (6.7%)
4	Aspiration Pneumonitis	6 (4.7%)	Fluid and Electrolyte Disorders	7 (6.7%)
5	Acute Cerebrovascular Dz.	5 (3.9%)	Respiratory Failure	6 (5.8%)
			Urinary Tract Infection	6 (5.8%)

*Diagnosis categories determined using Health Care Cost and Utilization Project Single-Level Clinical Classification Software